

AMENDMENT

In the Claims:

Please cancel claims 1-55 without prejudice or disclaimer.

Please enter the following new claims:

56. (New) A 55P4H4-related protein that comprises the exact amino acid sequence of Figure 2 (SEQ ID NO: 2), or a protein encoded by the cDNAs contained in the plasmid designated p55P4H4-EBB12 deposited with American Type Culture Collection as Accession No. PTA-1894.

57. (New) An 55P4H4-related protein that comprises at least one conservative substitution of the amino acid sequence of Figure 2 (SEQ ID NO: 2), or a protein encoded by the cDNAs contained in the plasmid designated p55P4H4-EBB12 deposited with American Type Culture Collection as Accession No. PTA-1894.

58. (New) A 55P4H4-related protein of claim 57 that comprises one conservative substitution.

59. (New) A 55P4H4-related protein that is at least 90% homologous to an entire amino acid sequence shown in Figure 2 (SEQ ID NO: 2).

60. (New) A 55P4H4-related protein of claim 59 that is more than 90% homologous to an entire amino acid sequence shown in Figure 2 (SEQ ID NO: 2).

61. (New) A 55P4H4-related protein of claim 59 that is at least 90% identical to an entire amino acid sequence shown in Figure 2 (SEQ ID NO: 2).

62. (New) A 55P4H4-related protein of claim 59 that is more than 90% identical to an entire amino acid sequence shown in Figure 2 (SEQ ID NO: 2).

63. (New) A 55P4H4-related protein that comprises at least 30, 35, 40, 45, 50, 55, 60, 65, 70, 80, 85, 90, 95, 100 or more than 100 contiguous amino acids of an amino acid sequence shown in SEQ ID NO: 2.

64. (New) A 55P4H4-related protein of claim 63 that comprises at least one conservative substitution.

65. (New) The 55P4H4-related protein of claim 63, wherein the 55P4H4-related protein has the amino acid sequence shown in SEQ ID NO: 2.

66. (New) An isolated 55P4H4-related protein that comprises an amino acid sequence which is exactly that of an amino acid sequence encoded by a polynucleotide selected from the group consisting of:

(a) a polynucleotide consisting of the sequence as shown in SEQ ID NO: 1, wherein T can also be U;

(b) a polynucleotide consisting of the sequence as shown in SEQ ID NO: 1, from nucleotide residue number 204 through nucleotide residue number 782, wherein T can also be U;

(c) a polynucleotide that encodes a 55P4H4-related protein whose sequence is encoded by the cDNAs contained in the plasmid designated p55P4H4-EBB12 deposited with American Type Culture Collection as Accession No. PTA-1894;

(d) a polynucleotide that encodes a 55P4H4-related protein that is at least 90% homologous to the entire amino acid sequence shown in SEQ ID NO: 2;

(e) a polynucleotide that encodes a 55P4H4-related protein that is more than 90% homologous to the entire amino acid sequence shown in SEQ ID NO: 2;

(f) a polynucleotide that encodes a 55P4H4-related protein that is at least 90% identical to the entire amino acid sequence shown in SEQ ID NO: 2;

*Sub B14*  
(g) a polynucleotide that encodes a 55P4H4-related protein that is more than 90% identical to the entire amino acid sequence shown in SEQ ID NO: 2;

(h) a polynucleotide that is fully complementary to a polynucleotide of any one of (a)-(g); and,

(i) a polynucleotide that selectively hybridizes under stringent conditions to a polynucleotide of (a)-(h).

67. (New) A protein produced by a process comprising steps of: culturing under conditions sufficient for the production of the polypeptide, a host cell that comprises an expression vector comprising a polynucleotide selected from the group consisting of:

(a) a polynucleotide consisting of the sequence as shown in SEQ ID NO: 1, wherein T can also be U;

(b) a polynucleotide consisting of the sequence as shown in SEQ ID NO: 1, from nucleotide residue number 204 through nucleotide residue number 782, wherein T can also be U;

(c) a polynucleotide that encodes a 55P4H4-related protein whose sequence is encoded by the cDNAs contained in the plasmid designated p55P4H4-EBB12 deposited with American Type Culture Collection as Accession No. PTA-1894;

(d) a polynucleotide that encodes a 55P4H4-related protein that is at least 90% homologous to the entire amino acid sequence shown in SEQ ID NO: 2;

(e) a polynucleotide that encodes a 55P4H4-related protein that is more than 90% homologous to the entire amino acid sequence shown in SEQ ID NO: 2;

(f) a polynucleotide that encodes a 55P4H4-related protein that is at least 90% identical to the entire amino acid sequence shown in SEQ ID NO: 2;

(g) a polynucleotide that encodes a 55P4H4-related protein that is more than 90% identical to the entire amino acid sequence shown in SEQ ID NO: 2;

(h) a polynucleotide that is fully complementary to a polynucleotide of any one of (a)-(g); and,

(i) a polynucleotide that selectively hybridizes under stringent conditions to a polynucleotide of (a)-(h); and,  
recovering the 55P4H4-related protein so produced.

68. (New) A 55P4H4 protein or portion thereof that comprises a peptide region of at least 5 amino acids of Figure 2 in any whole number increment up to the end of said peptide of Figure 2, wherein the peptide region comprises an amino acid position selected from:

a) an amino acid position having a value greater than 0.5 in the Hydrophilicity profile of Figure 11;

b) an amino acid position having a value less than 0.5 in the Hydropathicity profile of Figure 12;

c) an amino acid position having a value greater than 0.5 in the Percent Accessible Residues profile of Figure 13;

d) an amino acid position having a value greater than 0.5 in the Average Flexibility profile of Figure 14;

e) an amino acid position having a value greater than 0.5 in the Beta-turn profile of Figure 15;

f) a combination of at least two of a) through e);

g) a combination of at least three of a) through e);

h) a combination of at least four of a) through e); or

i) a combination of five of a) through e).

69. (New) A peptide of claim 68 and a physiologically acceptable carrier.

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